

Strategic Transportation Investment Transition Report

North Carolina
DEPARTMENT OF TRANSPORTATION

Submitted to
Joint Legislative Transportation Oversight Committee,
House of Representatives Appropriations Subcommittee on Transportation,
Senate Appropriations Committee of Department of Transportation,
Fiscal Research Division

November 1, 2014

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EXECUTIVE SUMMARY

Session Law 2013-183, requires the North Carolina Department of Transportation (Department) to submit certain reports:

State Transportation Improvement Program Transition Report – The Department of Transportation shall submit transition reports to members of the Joint Legislative Transportation Oversight Committee, House of Representatives Appropriations Subcommittee on Transportation and the Senate Appropriations Committee on Department of Transportation, and the Fiscal Research Division on March 1, 2014, and November 1, 2014. The reports shall include information on the Department's transition to Strategic Prioritization, overview changes to the State Transportation Improvement Program (STIP) and other internal and external processes that feed into the STIP, and offer statutory and policy recommendations or items for consideration to the General Assembly that will enhance the prioritization process.

The March 1, 2014, report shall also include an analysis of the distribution of tax and fee revenues between the Highway Fund and Highway Trust Fund and an analysis to determine if maintenance, construction, operations, administration, and capital expenditures are properly budgeted within the two funds and existing revenues are most effectively distributed between the two funds.

The Department's Transition to Strategic Prioritization

This November 1, 2014 Report represents an update to the previous March 1, 2014 Report and provides a status of the Department's ongoing steps to produce a Draft State Transportation Improvement Program (STIP) by December 2014.

This update continues to list factors which impact the process and identifies policy considerations as the full extent of STI results are tabulated. The Department has also initiated preliminary conversations regarding potential enhancements for the next prioritization process with the Prioritization (or P4.0) Workgroup.

Early indications of the programming process continue to reveal the positive impact of the STI legislation in which more projects and variety of transportation improvements are possible vs. under the previous Equity Formula (EF). As of the last Trust Fund status report (October 2013) the Department indicated that there was 767 miles to complete in the Intrastate system and nearly 205 miles to complete the last designated Urban Loops. There is a potential within the development of this Draft STIP that 102 additional miles of Intrastate system and 64 additional miles of urban loops could be programmed.

TRANSITION PROGRESS FROM MARCH TO NOVEMBER 2014

Since March 1 the Department continues to take and accomplish steps associated with operating under the STI legislation, while continuing to develop and let to construction transition projects. These steps have been conducted in a transparent manner and inclusive of local partner and public input. The Department has extensively used web-based tools to calculate scores for projects (combining quantitative data and local points to generate total scores) and used its website to publish these results. The Department provided a review and approval process to comply with Session Law 2012-84 so that MPO/RPO methodologies were inclusive of a data driven, multimodal, and public input process. The Statewide program (based 100% on data) was released in May, local points were assigned to projects eligible for the Regional Impact and Division Needs categories during the summer and total scores were released in September.

The Department is currently using the total scores of projects, budget availability, preconstruction/project schedule information, and adherence to a series of federal and state tests to develop a Draft STIP to be published (as required by STI law) in December 2014. The completion of Prioritization 3.0 (P3.0) has also ushered in the formation of a new Prioritization 4.0 (P4.0) Workgroup. Two meetings have taken place at the writing of this report for P4.0 Workgroup members to begin evaluating improvements to the prioritization process. The Department has also contracted with a consultant to perform a review of the data components of scoring criteria for highway and non-highway modes from P3.0 and will prepare preliminary recommendations prior to January 2015.

Review of all Local Input Point Methodologies

“The Department shall develop and utilize a process for selection of transportation projects that is based on professional standards in order to most efficiently use limited resources to benefit all citizens of the State. The strategic prioritization process should be a systematic, data-driven process that includes a combination of quantitative data, qualitative input, and multimodal characteristics, and should include local input. The Department shall develop a process for standardizing or approving local methodology used in Metropolitan Planning Organization and Rural Transportation Planning Organization prioritization.”

Per above Session Law 2012-84 the Department provided guidance and approval of all 38 MPO and RPO local methodologies prior to May 1, 2014. The following was provided to each MPO and RPO in preparation of their respective methodology and to give Department staff an evaluative matrix to determine adherence to the intent of the legislation. Each local methodology was also published on MPO/RPO websites, offered to citizens for public input and approved by respective Transportation Advisory Committees (TACs).

- Describe the MPO/RPO ranking process for all modes of transportation that identifies at least one quantitative and one qualitative criteria to be used in the scoring process. These criteria should be understandable to the public. In other words, the measures, and the percentages assigned to each measure should be defined, described and

- outlined in such a way that the public can follow how project points will be assigned.
- Describe how your organization intends to engage and solicit public input on your methodology: i.e., the rationale behind the preliminary assignment of points; posting of this approach on a public website; holding a public hearing to receive comments on the preliminary assignment and/or how your organization followed its public input policies to adhere to this requirement. At least one public review period and public meeting/hearing should be included in the process. This review period needs to allow sufficient time for consideration of any public comments prior to the Technical Coordinating and Transportation Advisory Committees (TCC/TAC) making the final point assignment.
- Describe how your TCC/TAC's will consider the input of public comments on the preliminary assignment of points as they develop and ultimately approve of the final point assignment.
- Describe how the final local point assignment (approved by your TAC) will be disseminated and shared with the public. Include dates on your schedule you are targeting to achieve this.
- Provide the TAC approval of your methodology.

NCDOT Divisions also held public comment periods to receive feedback and posted their preliminary point assignments on the Department's website.

Deployment of technology to calculate, publish and communicate STI scores

All quantitative scores for highway and bicycle and pedestrian projects were generated through a geographic information system (GIS) analytical tool referred to as SPOT Online. Excel spreadsheets were used to provide quantitative scores for the other non-highway modes and quantitative scores for all projects were published in May on the following NCDOT website (<http://www.ncdot.gov/strategictransportationinvestments/>).

Statewide Mobility projects to be included in the 10 year Program were highlighted in May as part of the release of project scores. 95 total projects funded out of the Statewide Mobility category were listed including 84 highway projects and 11 Aviation projects. No rail projects scored high enough to be included in the Statewide funding category. Those projects not highlighted were subsequently made available for point assignment in the SPOT Online tool for MPO/RPOs and NCDOT Divisions.

The points assigned by local partners and NCDOT Divisions (during the 3 months between June 2 and August 29) were added to the quantitative scores for projects to generate total scores for projects in the Regional and Division categories. The SPOT Online tool was used again to capture and tabulate the total scores for each project. As in previous prioritization efforts only 100 points could be assigned to any one project and points (up to 100) could be transferred from one neighboring MPO (or RPO) and/or from one Division to another.

Development of Draft 2016-2025 STIP

After an extensive review, the total project scores were provided to the Program

Development Branch in late September to start the programming process. That process is currently underway and is still subject to the programming considerations and factors listed on pages 6-14 of this report. The Draft STIP will be provided to NCDOT's Board and the General Assembly in December and published electronically on the following site: <http://www.ncdot.gov/strategictransportationinvestments/>

The Draft STIP will be organized to show both funded highway and non-highway projects by NCDOT Division. Each section will be preceded by a legend page listing federal funding sources and the STI funding category in which the project is funded. The Department plans to hold public input sessions on the Draft in spring of 2015 and anticipates a final STIP approval by the BOT in June 2015.

Prioritization 4.0 and Statistical Review of P3.0

Session Law 2013-410 (HB 92): the Department shall endeavor to continually improve the methodology and criteria used to score highway and non-highway projects pursuant to this Article, including the use of normalization techniques, and methods to strengthen the data collection process. The Department is directed to continue the use of a Workgroup process to develop improvements to the prioritization process. Workgroup participants shall include, but are not limited to the North Carolina League of Municipalities, the North Carolina Association of County Commissioners, the North Carolina Metropolitan Mayors Coalition, and the North Carolina Council of Regional Governments. The workgroup, led by the Prioritization Office, shall contain a minimum of four representatives each from the North Carolina Association of Municipal Planning Organizations and the North Carolina Association of Rural Planning Organizations, and these members will be selected by a vote of each organization. Department participants in the workgroup shall not exceed half of the total group.

A kickoff meeting was held on September 22 to start the P4.0 Workgroup. Members of this Workgroup are reflective of the legislative requirements cited above and are scheduled to regularly meet through end of this year and early 2015. P4.0 Workgroup will evaluate the P3.0 process and offer additional recommendations to strengthen scoring criteria, methodologies, and normalization techniques.

Initial examples of scoring methodologies and criteria which will be evaluated include:

- Contribution of funds in benefit-cost
- Proximity to military and transportation terminals
- Seasonal traffic considerations
- Determination of the number of local input points provided to MPOs/RPOs/Divisions
- Defining which projects are subject to reprioritization

Per P3.0 Workgroup recommendations the Department has also contracted with a consultant to provide a statistical review and evaluation of the P3.0 criteria and data components which determined quantitative scores. The consultant is specifically tasked to:

- Conduct a statistical review/analysis of each scoring criteria used in P3.0 and its

- associated formula, data, percent weight, and results across all modes
- Propose options for objectively comparing projects across different modes of transportation (such as using common evaluation criteria or normalizing quantitative scores)

A draft report of the consultant's findings and recommendations will be available prior to January 2015.

Project Programming Considerations for STI

Once scored, projects must be programmed for construction. The Department has been very successful in making sure that we keep the construction program moving by allowing projects to start construction as they are ready to proceed while other projects complete necessary pre-construction steps. STI will have significant impacts on the programming process.

Change in Geographic Restrictions - The 1989 Trust Fund legislation Equity Formula (which was replaced by STI) had strict limits on geographic distribution of funding. STI contains some maximum funding limits but is less geographically driven.

Budget Allocation Tests - The Equity Formula mandated 7 year budget allocation tests with a correction mechanism. The new STI budget tests apply to 5 year periods. The correction mechanism for over or under funds allocation is outlined in G.S. 136-189.11 (e).

Transition Period Projects - For the first STIP, projects that were scheduled for letting prior to July 1, 2015 (as of Oct. 1, 2013) will be exempt from the scoring process. It is possible that actual letting dates for some of these projects will occur after July 1, 2015, and some payments for these projects will come from funds received by the Department in FY-16 and beyond. Any projects (based on minor scope or cost changes) whose schedules slip beyond July 2, 2015 will retain their transitional status as indicated as so in the Draft STIP. However if the scope of a project that was scheduled for letting prior to July 1, 2015 is modified to require a new or supplemental environmental document, or an amendment to a long range plan, or the STIP to be funded for construction, then the new, revised project will lose its transition status and be subject to the prioritization requirement.

Elimination of Modal Set-asides - The Equity Formula had allocated a small set-aside of funds for various non-highway project types. STI provides that all modes compete for capacity expansion funds, though the initial programming process will use historical funding levels to create a floor and cap for highway and non-highway allocations.

Construction Sequence – Under the Equity Formula, multi-phase projects could be programmed to occur with consideration of optimum construction sequence

and driver expectation in mind. Segments will now be programmed consistent with scores achieved.

STIP Period Will Meet Federal Rule - The Department has been issuing a 7 year STIP that was embedded in a 10 year work plan. The Department proposes to continue to create a 10 year work plan, consisting of a 5 year Delivery Program and a 5 year Developmental Program. Federal regulations require the STIP to cover a period of at least four years.

Project Selection Less List Driven - The 1989 Trust Fund law created lists of projects that were to be funded based on type of project (intrastate system, loops, unpaved roads, etc.). STI will direct all major state construction funding in accordance with project level (statewide, regional, and division) and ranking.

Pre-construction portion of projects must be considered - The time factor for programming is not changed by the new funding allocation. It will still be necessary to allow time for development of environmental documents, prepare designs, obtain permits, obtain right of way, and relocate utilities. If pre-construction requirements have not been met, it may be necessary to program a project sooner than a higher scoring qualified project. No project will be elevated from “below the line” to fill a slot, but every effort will be made to ensure that funds are put to work as rapidly as possible through construction of qualified projects.

Some projects will be programmed prior to calculation of funds available for scored projects - Some categories of projects have been identified in the statute as exempt from scoring. Funds for these programs will be allocated prior to calculation of the 40/30/30 distribution of funds to STI projects. **Project categories that are exempt from the STI funding formulas** (Statewide, Regional, and Division) are the federal Congestion Mitigation and Air Quality Program (CMAQ), discretionary Federal Grants, Appalachian Development Highway funds (ADHS), legislatively designated Toll Gap funds, federal Statewide Planning and Research (SPR) funds and federal Urban Area planning (PL) funds which are identified in G. S 136-189.11 (b).

Some projects will be included in the funding levels, but prioritized by different processes - Projects may be subject to the distribution of funds by level but exempt from SPOT scoring. These programs are Bridge Rehab/Replacement, Interstate Maintenance, Safety, Railroad Crossings, federally funded Transportation Alternatives (TA), Economic Development, and Urban Area Surface Transportation Program sub-allocations (STP-DA) for Urban Areas with populations exceeding 200,000 as identified in G. S. 136- 189.11(c). As these projects are identified, their programmed cost will be assigned to the appropriate STI budget category.

Bonus Allocation - The STI legislation provides for local bonus allocations equal to one-half of the local funding or toll revenue bonding amounts up to certain caps (\$200,000,000 for funds committed prior to July 1, 2015, and \$100,000,000

for funds committed after that date).

Current development of the draft 2016-2025 STIP indicates over \$600 million in bonus allocation may be programmed. This total is mostly represented by toll revenue bonds but also through some local contributions. Since the bonus allocation is available for a five year period and the Department does not know the proposed uses of these funds, for this STIP the Department will allocate one-fifth of the bonus funds for each project to be made available to each of the five years.

If the actual projects selected create schedules and budgets that vary from this equal allocation, some other project schedule shifts may be required to balance annual budgets. Only local funding participation that is over and above what is typically required of local governments (right of way dedication, utility relocations, etc.) will be considered for the bonus allocation program.

Changes to STIP and the Internal and External Processes Feeding To It

This will be the first (and possibly only) STIP prepared in conformity with the current Federal transportation authorizing legislation – Moving Ahead for Progress in the 21st Century (MAP-21), signed into law July 6, 2012. While this act only funded surface transportation programs for federal fiscal years (FFY) 2013 and 2014, the Department is assuming that the program fund distribution and program rules will remain in 2015 and beyond. Many aspects of the law are consistent with prior acts. The STIP is required to be fiscally constrained, deal with air quality conformity when local conditions violate the standards, and requires collaboration with Metropolitan Planning Organizations. (Collaboration with Rural Planning Organizations is mandated by state law.) The fundamentals of the process to be followed are unchanged.

MAP-21 removed some funding categories and offered additional flexibility in overall spending. The National Highway Performance Program (NHPP) will now be the source for project funding that was formerly covered by the Interstate Maintenance Program. A significantly reduced Bridge Program will also be funded through the NHPP and the STP programs, other bridge replacement/rehab projects will be made up by allocations of state funding.

Tax and Fee Structure Analysis

Transportation revenue in North Carolina comes from four primary sources: Motor fuels tax (44.4%), Federally imposed taxes and fees (23.1%), Highway Use tax (13.4%), and various fees (19.1%). These revenue sources are allocated between the Capital budget and the Operations and Maintenance (O&M) budgets by either state or federal legislation. All but a very small percentage of the Federal-aid funds are required to be allocated to projects through the STIP, so they are considered as capital funds even though some of the allowable expenses are O&M. The state motor fuels tax is split 75% to the Highway Fund (largely O&M budget), and 25% to the State Highway Trust Fund (largely the capital budget). The Use tax is allocated 100% to the State Highway

Trust Fund (the capital budget), while a majority of the fees are allocated to the Highway Fund (O&M budget).

Historically roughly 30% of the Department's highway budget has been allocated to O&M activities, while 44% has been allocated to capital. Based on the reassignment of duties and responsibilities between the Trust Fund and the Highway Fund, unless revenue apportionment is revised, the budget allocation to capital will increase to approximately 50%, while the allocation to highway O& M will decline to 26%. In the absence of significant revenue increases and to maintain the extensive investment the state has made in its transportation infrastructure, it is felt that the percentage of the budget allocated to O&M activities will need to stay at least at 30%. This will require a legislative change in the current revenue allocations, which will impact the total available for allocation under the scoring process.

FACTORS INFLUENCING THE PROGRAMMING PROCESS

Numerous constraints and criteria influence what projects are selected for the STIP and when funding is allocated for the various processes necessary for project construction. The three primary funding phases indicated in the STIP are Preliminary Engineering (PE), which generally consists of planning, environmental studies and design activities; Right of Way acquisition including utility relocation; and Construction.

For state and federal purposes, any project identified for funding in the 10 years covered by our STIP document is eligible for PE funding. The Preconstruction Scheduling (PS) process determines how far in advance of the scheduled Right of Way acquisition or Construction PE should begin. In PS, all the activities necessary to obtain the required environmental documents and create plans necessary to acquire the needed rights of way for a project and then let construction contracts are considered. The critical path schedule for these activities provides the lead time necessary for PE expenses prior to the Right of Way acquisition and Construction dates. Due to the long lead times and relatively small amounts needed for each individual project, PE is budgeted at a set amount per year rather than for each specific project (as costs are incurred for a project, the amount is assigned to the project). The upcoming STIP will budget roughly 10% of the annual STIP budget (\$165 M per year) for all preconstruction activities.

The Right of Way amount for each project or project segment is budgeted and described separately for each project in the STIP. In order to authorize Right of Way acquisition there must be an approved environmental document and a set of Right of Way plans. Utility relocations are frequently authorized as a part of the Right of Way authorization but require a separate set of plans. Right of Way is generally programmed 1 to 2.5 years in advance of construction, depending on the amount of land required, the number of homes and businesses that have to be re-located and utility impacts. Other major activities that are conducted during the Right of Way phase include railroad coordination when a project impacts a rail line and obtaining final permits.

The Construction amount for each project or project segment is budgeted and described separately for each project in the STIP. In order to authorize construction a project must have an approved environmental document, all necessary permits, the necessary Right of Way acquired, and a set of construction plans. The primary determinants of when construction activity is scheduled are its priority ranking, the amount of time required to perform all the necessary preconstruction activities, and projected budget availability.

Programming Factors That Have Been Eliminated by STI

Equity Formula – The EF was established by the legislature in 1989 (G.S. 136-17.2a). The purpose of this formula was to distribute state highway trust funds and federal aid funds to each of the established funding regions (7 paired transportation divisions) based on 50% population, 25% miles remaining of the Intrastate System projects, and 25% equal share over a seven year period. In addition, specific Intrastate System

projects and Urban Loop projects that were eligible for funding from the State Highway Trust Fund were identified.

The STI legislation eliminated the EF as well as the requirement that the intrastate projects eventually would be constructed. Specific Urban Loop projects had previously been deleted. The EF was replaced by STI which set out three funding categories – Statewide, Regional, and Division. Project selection in the Statewide Category is 100% data driven and there is no geographical allocation (although a restriction is included on the maximum that may be allocated in a corridor). The Regional Category is made up of the 7 paired transportation divisions (same regions that were established in 1989) and project selection is 70% data driven and 30% local input. Projects within a funding region will compete within the region. The Division Category is made up of the 14 transportation divisions and is 50% data driven and 50% local input. Projects within each division will compete within the division. Projects eligible in a higher category are eligible to be funded in lower categories.

Investment Strategy – The investment strategy was established as a part of Prioritization 2.0. The purpose was to determine how to divide the available funding between different modes as well as different highway categories such as mobility, safety, and infrastructure health. The Department held 7 Investment Strategy Summits with local stakeholders to establish targets for the different regions to use as a guide during the programming process.

The STI legislation eliminated the need for the investment strategy because funding will be allocated to the different modes and different highway categories based on a competitive basis as outlined by the criteria for each of the funding categories. In addition, there are certain types of projects with alternate criteria such as bridge replacement, interstate maintenance, and highway safety that will have their own prioritization processes. Plus the P3.0 Workgroup has recommended a normalization approach for funding highway and non-highway projects in the Regional and Division categories since identification of common scoring criteria across modes did not occur.

Construction Sequence – The Department has typically broken larger scale projects into multiple segments due to funding constraints and to minimize the disruption to traffic by not having overly long construction zones. This will be more complex under the requirement to score highest projects first. In addition, it is possible that segments of a large project that do not connect could be selected with a missing segment not being selected.

Under STI the Department will program based on the results of prioritization. For projects made up of multiple segments the potential exists for bottlenecks to occur due to strictly programming based on numerical project rank. This could lead to a negative impact for the public and on traffic flow and corridor mobility.

Programming Factors That Have Been Significantly Modified by STI

Funding Constraints - There are two primary sources of funds used to complete projects

in the STIP: federal-aid funding and North Carolina Highway Trust fund. The funding allocations and rules that govern federal-aid funding programs were not affected by STI; however, significant changes were made to project selection and the allocation and use of State Trust fund proceeds.

Since passage of legislation in 1989 that established North Carolina's Highway Trust fund, there has been a pot of funding reserved for completion of urban loops and the intrastate system. STI legislation removed this reservation of funding and made additional highway projects and non-highway modes of transportation eligible for this funding.

Loop and intrastate projects that have not been completed will have to compete through the prioritization process for funding. Intrastate projects that were not authorized for construction as of July 1, 2015, will be eligible for Statewide Strategic Mobility category funding even if the roadway proposed for improvement would normally qualify for Regional Impact or Division Needs funding. Upon completion of the intrastate project, any future improvements would be funded in the category for which the road would normally qualify.

Priority Ranking - The priority ranking has been used as the primary guide for the selection of projects in two previous STIP updates. Deviation was allowed from the computed project ranking as long as explanation was provided. For instance, in a highway project that was divided into multiple segments, project scheduling could be modified to ensure that adjacent segments were constructed in a logical progression.

Modal Funding - In previous project prioritization and selection exercises, each mode of transportation had its own prioritization and no attempt was made to compare. Funding constraints, established patterns of funding dispersion between the modes, and input from MPOs, RPOs, and the public were used to make decisions about modal funding splits. Since federal funding came to specific programs and each program had its own rules and the State Highway Trust fund was dedicated to highway projects, the competition between various modes was limited.

The passage of STI also removed some of the barriers that prevented the modes from competing for the same funds. To most effectively use this new funding flexibility, a prioritization process has to be capable of comparing the benefits derived from proposed projects in different modes of transportation; however, this has proven difficult and an interim solution has been developed. The prioritization process that will be used to rank projects in the upcoming STIP cycle does not attempt to compare projects in the Regional and Division categories by different modes and uses different quantitative scoring methods for each mode. In an attempt to ensure that there will be a reasonable distribution of funding between various modes, the following process will be used:

- **Statewide Strategic Mobility Funding (Statewide Level)** – Since only highway, aviation (with funding limits), and freight rail projects are eligible for funding on the statewide level, the scores from these three modes will be

used without adjustment when funding is assigned on the statewide level.

- **Regional Impact and Division Needs Funding** – Funding will be allocated so that a minimum of 90 percent of available Regional Impact and Division Needs funding is allocated to the highway mode and 4 percent is allocated to Non-Highway modes. The remaining 6 percent will be assigned to the highest ranking projects across all modes.

Projects Contained in the Transition Period

The STI legislation provided a specific exemption for “projects in the State Transportation Improvement Program that are scheduled for construction as of October 1, 2013, in State fiscal year 2012-2013, 2013- 2014 or 2014–2015”. The largest share of these mostly “I”, “R”, “U” TIP projects total nearly \$3 Billion. While it is anticipated that most of these projects will be shown in the upcoming STIP as “under construction”, due to the department’s use of cash flow budgeting the actual funding of these projects will extend several years into the new program. It is currently anticipated that these future year commitments will decline over time to FY 2020. In this era of budget uncertainty, the Department will exercise close management to insure that our future commitments do not exceed our cash availability.

ALTERNATIVE PRIORITIZATION FOR PROGRAMS AND PROJECTS

Bridge Replacement - Bridge replacement candidates are prioritized based on a calculated Replacement Index score which is based on many factors including the condition of various structural elements, the ability to accommodate current traffic demands, and any vehicle weight restrictions. The final selection of bridges will be shown as programmed for replacement after prioritizing replacement candidates, consulting with Division personnel, reviewing the estimated remaining life, and considering ongoing maintenance costs. Bridge replacement projects will be charged to the appropriate STI budget category as determined by the route.

Interstate Maintenance - All sections of interstate highway are separated by division and county with pavement condition ratings and a Pavement Management System (PMS) recommendation for the treatment of the section. Sections that had been treated in the last few years with an asphalt overlay were scheduled for either another overlay or mill and replace about 11 years after the most recent treatment. Concrete pavements are scheduled for diamond grinding and resealing about 15 years following construction. Continuously reinforced concrete pavement sections are scheduled for concrete patching and 5 inch asphalt overlays.

Some concrete and asphalt sections will be selected for patching at intermediate times to defer more substantial treatments for several years. Following the initial assessment of treatments and times, the schedule will be adjusted to the available budget. There is some engineering judgment associated with that process and the above referenced maintenance schedule is based on the likelihood that pavement condition will remain relatively stable until the pavement rehabilitation is scheduled. All Interstate maintenance projects will be shown in the STIP as Statewide level projects.

Highway Safety Improvement - North Carolina's federally funded safety projects are developed to address specific and documented safety needs. These safety projects are identified through crash analyses and investigations and through other documented risk analyses (such as safety audits). Candidate safety improvement projects are prioritized based upon a calculated safety benefit cost (B/C) ratio (approved by the Federal Highway Administration) that includes the capital cost to construct the project and expected increases in maintenance costs over the life of the project.

The benefit only includes the safety benefit generated through expected crash reductions and reductions in the severity of the crashes. The crash reduction factors used are developed through an ongoing process of evaluating completed safety projects at the state and national level. Safety improvement projects will be charged to the appropriate STI budget category as determined by the route. Where the project is at the intersection of two routes on different categories, generally the funding will come from the higher route category. Due to the need to provide quick responses to changing traffic and accident patterns, only near-term projects will be shown in the STIP. Future year dollars will be set aside each year for additional safety projects.

Highway-Railroad Grade Crossings - NCDOT uses an Investigative Index (I.I.) as a basis for project selection. This process, which has been approved by FHWA, uses crash history and highway and railroad operational and physical data to provide a calculated value of risk for each public crossing statewide. Candidate sites are selected for initial field review by Rail Division and, when available, Division of Highways Traffic Engineering staff to confirm the data-driven model value and to reevaluate sight distances. Projects are subsequently selected for crossing warning systems or crossing closure/consolidation project planning/implementation. When the project is at a crossing where the highway and the rail routes are on different categories, generally the funding will come from the higher route category. Due to the need to quickly respond to changing traffic and accident patterns, only near-term projects will be shown in the STIP. Future year dollars will be set aside each year for additional safety projects.

Transportation Alternatives Program (TAP) – Transportation Alternative projects generally fall into four categories: Bicycle/Pedestrian, Roadside Environmental, Direct Attributable to Large Urban Areas, and Others. NCDOT is not an eligible project sponsor or funding recipient, but is responsible for administering the program funds not directly allocated to other organizations. Furthermore, FHWA as well as STI requires a competitive selection process and elements of public involvement for projects funded by TAP.

- Bicycle/Pedestrian – Bicycle and pedestrian projects will be prioritized based on a weighted formula using safety, access, adjacent land use density, constructability, and a benefit to cost ratio. These projects are all considered to be Division Needs so that 50% of the project score will come from local (MPO, RPO, Division) input.
- Roadside Environmental - Vegetation Enhancement candidate projects are prioritized based on a calculated Vegetation Enhancement Index score. The Index is dependent upon many factors including: the project/environmental commitments, safety, economic development, tourism, and long term sustainability. The Divisions and the Roadside Environmental Unit select vegetation enhancement projects based on their Vegetation Enhancement Index score for the Department. Vegetation projects will be charged to the appropriate STI budget category as determined by the route.
- Other Transportation Alternatives – The Federal Transportation Alternatives Program has a number of allowable activities that do not fit into our bicycle and pedestrian or roadside environmental programs. Project areas such as Safe Routes to Schools, Scenic Overlooks, Environmental Mitigation, Archaeological Studies and Work force Development are also eligible activities. A Committee will be formed to evaluate and prioritize candidate projects in these areas. This Committee will also formulate a methodology to determine how to appropriately account for these expenditures by STI budget category.

Transportation Management Area Direct Attributable Funds (STP-DA & TAP-DA) – FHWA annually allocates a portion of the Surface Transportation Program and the Transportation Alternatives Program to Transportation Management Areas (TMAs) within the state. North Carolina has eleven TMAs which are the MPOs for the largest urbanized areas whose population exceeds 200,000. Federal regulations provide these large MPOs great flexibility on how to use these funds, although there is a requirement that TAP decisions must be made on a competitive basis. Each of the eleven TMA MPOs has their own methodology for selecting projects. NCDOT has agreed to support DA projects in every case, so as long as the projects selected meet the federal requirements for the funding source. These projects are considered as Division Need projects unless they are assigned to statewide or regional routes. These projects will be added to the STIP as they are identified by the respective MPO. Future year budget will be reserved for this purpose.

Economic Development Funding Guidelines – STI allows up to \$10 million per year to be used to support time-sensitive job creation (economic development) opportunities. A written request including an analysis of the economic benefits of the potential project completed by the Department of Commerce should be submitted to the Department to request Economic Development Funds. The following factors are weighed when consideration is given to providing economic development funding: the average projected wage for the business versus the average wage for the county where the project will be located, the size of the initial investment by the business, the tax benefit to the State, and the number of employees. Once an application is received the appropriate Division will do a field inspection, determine traffic and safety concerns, and evaluate the projected cost of the project. The cost and economic development information will be used to support two threshold tests:

- Candidate projects for funding must have a planned private infrastructure investment of at least 5 times the expected STIP funds used in the Economic Investment Project, and/or
- The anticipated number of new jobs created must be of a sufficient number such that expected STIP funds used in the Economic Investment Project does not exceed \$10,000 per created job.

If the project meets the threshold tests, and it receives support from the Division, the proposed project and recommendation will be forwarded to the Secretary of Commerce and the Secretary of Transportation for their concurrence. If concurrence is received, the project will be presented to the Board of Transportation for approval. These projects will be added to the STIP when approved and will be charged to the appropriate STI budget category as determined by the route.

POLICY ISSUES AND CONSIDERATIONS

Transition Period Implementation - STI grants authority to fund the construction of projects scheduled between now and July 1, 2015. The construction of projects not specifically exempt (such as safety, interstate maintenance, and CMAQ) scheduled after July 1, 2015, are subject to being prioritized through the SPOT 3.0 process. The final results of the SPOT 3.0 prioritization and subsequent programming will not be known until June 2015, with the adoption of the new STIP. Many projects with let dates beyond July 1, 2015, have either right of way (ROW) or the initial preliminary engineering (PE) scheduled between now and July 1, 2015.

In order to minimize the risk of expending time and money on projects that will not be included in the next STIP, and at the same time minimize the delay for those projects that have the greatest probability of being included in the upcoming 2016-2025 STIP through the Strategic Prioritization scoring process, the Department delayed any initial ROW or initial PE authorizations until May 2014 to wait to see what the Strategic Prioritization technical scores revealed for projects currently in the database (submitted in prior years). After May 2014, DOT proceeded with initial ROW or PE authorizations for those statewide projects that will be funded from the anticipated statewide budget. Decisions will also need to be made concerning PE or ROW for those regional and division projects that appear to have the greatest possibility of being funded in the upcoming Draft STIP, acknowledging that local input scores may change the final priority ranking of some portion of these projects.

Projects currently scheduled for PE or ROW between May 2014 and January 2015 that do not receive funding authorization will be reviewed in December 2014. Any projects that have not previously received authorization, but are included in the draft STIP for funding may then be authorized.

If a project has a currently scheduled let date prior to July 1, 2015, or is in a project category that is either exempt from the STI process or subject to a different prioritization process than the STI/SPOT designated process, it shall have authorizations processed on the currently approved schedule. This policy will not stop work on any on-going project studies or ROW acquisition.

Program Stability – The STI law requires a continual evolution and improvement of the Strategic Prioritization System. The Department cannot have an efficient delivery system of projects that typically take 5 to 10 years to develop if priorities change every

2 years. The first two iterations of prioritization dealt with this issue by not reprioritizing projects in the first 5 years of the STIP. The Prioritization 4.0 Workgroup is evaluating options to recommend to the Department to achieve greater program stability and efficiency in project delivery. This evaluation includes how to define which projects are subject to reprioritization and are therefore except from future prioritization requirements.

Toll Restrictions – In an effort to minimize disruption to high scoring toll projects, NCDOT intends to include 6 turnpike projects in the Draft STIP. Based on current state legislation (§ 136-89.183) North Carolina can study 9 turnpike projects however 5 of these slots are taken by Triangle Expressway (3 slots), Monroe Connector/Bypass, and I-77 HOT lanes in northern Mecklenburg/Southern Iredell. During the programming of the Statewide Strategic Mobility projects, it was determined that 6 new turnpike projects scored high enough to receive funding. Therefore, 2 of the projects cannot advance unless General Statutes are amended.

Based on the prioritization scores, I-5507, which proposes to build express toll lanes on I-485 in Mecklenburg County and R-2721/R-2828, which proposes to build NC 540 in southern Wake County are the 2 projects that currently should not advance.

However, there are two other pieces of legislation that complicate the decision-making for toll projects. Legislation from 2012 states that 2 projects from the top 35 of the Mobility Fund project scores must be selected and may be subject to G.S. 136-18(39a). To fulfill this requirement, I-5507 would need to advance in addition to the I-77 HOT lane project in Mecklenburg/Southern Iredell that has already advanced to construction.

Also, Session Law 2013-94 states that the planning/environmental document for the Southeast Extension of the Triangle Expressway should be expedited, making R-2721/R-2828 a logical candidate to advance.

According to an interpretation of Session Law 2013-94 by General Assembly staff, the Department can continue planning/environmental work on R-2721/R-2828 (NC 540 in southern Wake County) and this will not count as one of the 9 projects that the Department is allowed to study; however, once it advances to construction, it would consume one of the 9 slots. The earliest that any construction is scheduled on NC 540 is FY 2018; therefore, the Department will continue planning/environmental work and this will not affect any other projects; however, without a legislative change, the project cannot be constructed.

Planning/environmental work is on-going for Project I-5507 (I-485 in Mecklenburg County) and the project is scheduled for right-of-way acquisition in FY 17 and construction in FY 18. The Department will continue planning/environmental work on this project to avoid a highly disruptive stop; however, continuing planning/environmental studies on I-5507 will put NCDOT at the statutory limit on the number of toll projects which can be studied.

The Department recommends amending G.S. 136-89.183 (2) by removing the cap on

the number of Turnpike Projects that may be studied/planned since toll projects cannot advance to construction without legislative approval.

Competitive, Discretionary Grants - STI law exempts the grant funds from prioritization, however it does not exempt any required state matching funds and therefore it is not clear how those funds should be handled/administered. Also frequently there is insufficient time to run these projects through a normal prioritization process.

To allow for quick response to these new opportunities for funding, the Department recommends that up to \$3 million of state matching funds required to access the exempt federal funds be exempted from prioritization.

STI BUDGET ALLOCATIONS BETWEEN THE HIGHWAY FUND AND THE HIGHWAY TRUST FUND

Part of the STI legislation was an attempt to more clearly define the functions of the Highway Fund as an Operations and Maintenance Budget, and the STIP (comprised of the Highway Trust Fund and Federal-aid Funds) as a system Capital Improvements Budget. Doing so meant that some activities that had previously been funded through the STIP will now be funded through the Highway Fund while some activities that had previously been budgeted for in the Highway Fund will now be programmed activities in the STIP. The primary activity shifts are:

- Powell Bill Funding - \$56 Million shifted from the Trust Fund to the Highway Fund
- Various Highway Maintenance Activities - \$89 Million shifted from the Trust Fund to the Highway Fund
- Various Modal Capital Activities - \$45 Million shifted from the Highway Fund to the Trust Fund

These shifts represent a net budget impact of \$100 Million in annual expenditures being shifted from the Trust Fund to the Highway Fund. In addition, it is proposed to change the amount of funds being budgeted in the STIP for bridge replacements from roughly \$250 Million per year to \$50 Million per year by 2018 (MAP-21 change), creating an additional need for bridge maintenance and replacement funding from the Highway Fund.

SFY 2015 Budgets	Highway Fund (\$M)	TIP Highway Trust Fund & Fed Aid (\$M)	Total Anticipated Funding (\$M)	*Budget Needs (\$M)
Pavements	463	100	563	613
Bridges	153	100	253	275
Maintenance (including Traffic Operations)	449	-	449	568
Totals	1065	200	1265	1456

**Budget need values are equivalent to values presented in March 2014 STI report and represent retaining Current Asset condition scores and Maintenance & Traffic Operations Levels of Service. Budget needs to raise system condition scores and levels of service to Department's established target levels are currently under evaluation as part of the preparation of the Maintenance Performance Report (due December 2014).*

HIGHWAY FUND AND HIGHWAY TRUST FUND REVENUE DISTRIBUTION ANALYSIS

The following tables provide North Carolina Transportation Program Distributions by Function and Source of Revenues for SFY 2013-2015.

APPENDIX A – SFY 2013 BUDGET DISTRIBUTION

Appendix B

Total North Carolina Transportation Program Distributions by Function and Source of Revenues, 2012-13

Function	Highway Fund	Highway Trust Fund	Other	Federal	Total
DOT Administration	\$ 87,008,299	\$ 12,121,971	\$ 630,531	\$ -	\$ 99,760,801
<i>Division of Highways</i>					
Administration	34,672,527	20,290,935	1,734,560	-	56,698,022
Construction	60,045,243	735,688,073	-	866,320,000	1,662,053,316
Maintenance	1,188,182,509	-	-	-	1,188,182,509
Planning and Research	4,055,402	-	-	17,680,000	21,735,402
OSHA Program	372,792	-	-	-	372,792
Ferry Operations	41,038,132	-	5,000,000	-	46,038,132
<i>State Aid</i>					
Municipalities	89,274,620	53,063,643	-	-	142,338,263
Public Transportation	84,643,069	-	-	38,800,000	123,443,069
Airports	22,311,031	-	-	20,000,000	42,311,031
Railroads	21,201,153	-	-	188,399,711	209,600,864
Governor's Highway Safety	273,093	-	-	12,305,026	12,578,119
Division of Motor Vehicles	93,156,385	4,337,627		-	97,494,012
NC Turnpike Authority	-	52,306,378	788,264,755	16,000,000	68,306,378
NC Mobility Fund	-	75,500,000			75,500,000
Prioritization Reserve	-	-	-	-	-
Other State Agencies	61,539,875	-	-	-	61,539,875
Reserves and Transfers	20,066,363	2,400,000	180,400	-	22,466,363
Transfer to General Fund	198,189,507	27,595,861	-	-	225,785,368
Capital Improvements	15,000,000	-	-	-	15,000,000
Debt Service	-	81,481,543	-	58,161,288	139,642,831
Collegiate Cultural and Special Plate	-	-	7,369,020	-	-
Uncommitted Trust Fund Administration	-	5,533,969	-	-	5,533,969
Total Transportation	\$ 2,021,030,000	\$ 1,070,320,000	\$ 803,179,266	\$ 1,217,666,025	\$ 5,112,195,291

APPENDIX A (Continued) – SFY 2014 BUDGET DISTRIBUTION

Appendix B

Total North Carolina Transportation Program Distributions by Function and Source of Revenues, 2013-14

Function	Highway Fund	Highway Trust Fund	* Other	Federal	Total
DOT Administration	\$ 91,066,219	\$ 12,318,437	\$ 4,824,858	\$ -	\$ 108,209,514
<i>Division of Highways</i>					
Administration	35,139,990	19,703,787	335,192	-	55,178,969
Construction	61,669,922	930,926,530	-	826,320,000	1,818,916,452
Maintenance	1,120,543,988	-	-	-	1,120,543,988
Planning and Research	4,055,402	-	-	17,680,000	21,735,402
OSHA Program	365,337	-	-	-	365,337
State Aid to Municipalities	142,102,740	-	-	-	142,102,740
<i>Multi-Modal</i>					
Airports	28,744,510	-	-	18,000,000	46,744,510
Bicycle	751,066	-	-	40,000,000	40,751,066
Ferry	40,935,538	-	5,000,000	-	45,935,538
Public Transportation	85,244,235	-	-	31,000,000	116,244,235
Railroads	40,142,294	-	-	131,158,494	171,300,788
Governor's Highway Safety	284,932	-	-	12,000,000	12,284,932
Division of Motor Vehicles	118,994,643	4,356,905	34,825,020	-	158,176,568
NC Turnpike Authority	-	51,130,032	14,379,408	16,000,000	81,509,440
NC Mobility Fund	-	-	-	-	-
Other State Agencies	39,424,486	-	26,800,000	-	66,224,486
Transfer to General Fund	218,134,644	-	-	-	218,134,644
Other Reserves	3,134,853	400,000	-	-	3,534,853
Capital Improvements	18,055,500	-	-	-	18,055,500
Debt Service	-	79,170,090	-	86,325,200	165,495,290
Uncommitted Trust Fund Administration	-	7,081,719	-	-	7,081,719
Total Transportation	\$ 2,048,790,299	\$ 1,105,087,500	\$ 86,164,478	\$ 1,178,483,694	\$ 4,418,525,971

* Other does not include \$3,492,041,645 in receipts related to projects that represent a duplication of other budgeted funds.

APPENDIX A (Continued) – SFY 2015 BUDGET DISTRIBUTION

Appendix B

Total North Carolina Transportation Program Distributions by Function and Source of Revenues, 2014-15

Function	Highway Fund	Highway Trust Fund	* Other	Federal	Total
DOT Administration	\$ 96,925,260	\$ 12,121,866	\$ 5,854,015	\$ -	\$ 114,901,141
<i>Division of Highways</i>					
Administration	35,139,990	19,701,168	335,192	-	55,176,350
Construction	46,869,878	1,018,094,812	-	866,320,000	1,931,274,690
Maintenance	1,075,505,307	-	-	-	1,075,505,307
Planning and Research	4,055,402	-	-	17,680,000	21,735,402
OSHA Program	358,030	-	-	-	358,030
State Aid to Municipalities	146,328,000	-	-	-	146,328,000
<i>Multi-Modal</i>					
Airports	21,444,510	-	-	18,000,000	39,444,510
Bicycle	721,023	-	-	-	721,023
Ferry Operations	38,243,221	-	5,000,000	-	43,243,221
Public Transportation	85,244,235	-	-	31,000,000	116,244,235
Railroads	23,731,969	-	-	121,954,342	145,686,311
Governor's Highway Safety	279,233	-	-	12,000,000	12,279,233
Division of Motor Vehicles	118,544,334	4,356,905	15,925,687	-	138,826,926
NC Turnpike Authority	-	51,130,032	12,217,743	16,000,000	79,347,775
NC Mobility Fund	-	-	-	-	-
Other State Agencies	39,661,809	-	26,800,000	-	66,461,809
Transfer to General Fund	215,871,719	-	-	-	215,871,719
Other Reserves	15,290,666	400,000	-	-	15,690,666
Capital Improvements	19,937,700	-	-	-	19,937,700
Debt Service	-	60,307,448	-	86,322,952	146,630,410
Uncommitted Trust Fund Administration	-	(3,719,091)	-	-	(3,719,091)
Total Transportation	\$ 1,984,142,286	\$ 1,162,393,140	\$ 66,132,637	\$ 1,169,277,304	\$ 4,381,945,367